IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

JULIA ROBERTSON-ARMSTRONG	:	CIVIL ACTION
	:	
v.	:	
	:	
ROBINSON HELICOPTER COMPANY, INC., et al.	:	NO. 13-2810

MEMORANDUM

Bartle, J. November 19, 2015

Plaintiff Julia Robertson-Armstrong ("Robertson-Armstrong") was severely injured on July 20, 2011 when a helicopter in which she was a passenger crashed in New Jersey. She has sued Robinson Helicopter Company, Inc. ("Robinson"), the manufacturer of the helicopter, as well as Nassau Helicopters, Inc. ("Nassau"), which owned and operated it at the time of the crash.[1] Her complaint includes claims for strict liability, negligence, negligent misrepresentation and omission, and fraud against Robinson and a negligence claim

1. Roberston-Armstrong also sued three related business entities: Textron, Inc. ("Textron"); AVCO Corporation ("AVCO"); and Lycoming, a/k/a Lycoming Engines, a/k/a Lycoming Engines Operating Division of AVCO Corporation, a/k/a Textron Lycoming Reciprocating Engine Division ("Lycoming"). She alleged that Lycoming had manufactured the engine of the subject helicopter and its "fuel related components," that Lycoming was a division of AVCO, and that Textron was liable for AVCO's acts under a participation theory. On April 23, 2014 the court dismissed Robertson-Armstrong's claims against Lycoming and Textron. The parties subsequently stipulated to the dismissal of Robertson-Armstrong's claims against AVCO and Nassau's crossclaims against AVCO and Textron.

against Nassau. Robinson and Nassau subsequently filed crossclaims against one another, each asserting that the other is liable for the harm alleged.

Robinson has filed a number of pretrial motions challenging Robertson-Armstrong's experts under Daubert v. Merrel Dow Pharmaceuticals, 509 U.S. 579 (1993), and Rule 702 of the Federal Rules of Evidence. We will now consider the motion of Robinson to preclude Robertson-Armstrong's expert Colonel William Lawrence ("Col. Lawrence") from offering certain opinions at trial.

I.

The court has a "gatekeeping" function in connection with expert testimony. See Gen. Elec. Co., et al. v. Joiner, 522 U.S. 136, 142 (1997); see also Daubert, 509 U.S. at 589. Rule 702 of the Federal Rules of Evidence provides:

> A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if: (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case.

Fed. R. Evid. 702. As our Court of Appeals has repeatedly noted, Rule 702 embodies three requirements: qualification,

reliability, and fit. Pineda v. Ford Motor Co., 520 F.3d 237, 244 (3d Cir. 2008).

An expert is qualified if he "possess[es] specialized expertise." Schneider ex rel. Estate of Schneider v. Fried, 320 F.3d 396, 404 (3d Cir. 2003). This does not necessarily require formal credentials, as "a broad range of knowledge, skills, and training qualify an expert," and may include informal qualifications such as real-world experience. In re Paoli R.R. Yard PCB Litig., 35 F.3d 717, 741 (3d Cir. 1994). The qualification standard is a liberal one, and an expert may be sufficiently qualified under Rule 702 even if "the trial court does not deem the proposed expert to be the best qualified or because the proposed expert does not have the specialization that the court considers most appropriate." Holbrook v. Lykes Bros. S.S. Co., 80 F.3d 777, 782 (3d Cir. 1996).

To determine reliability, we focus not on the expert's conclusion but on whether that conclusion is "based on the methods and procedures of science rather than on subjective belief or unsupported speculation." Schneider, 320 F.3d at 404 (internal quotation marks omitted). Our analysis may include such factors as:

> (1) whether a method consists of a testable hypothesis; (2) whether the method has been subject to peer review; (3) the known or potential rate of error; (4) the existence and maintenance of standards controlling the

> technique's operation; (5) whether the method is generally accepted; (6) the relationship of the technique to methods which have been established to be reliable; (7) the qualifications of the expert witness testifying based on the methodology; and (8) the non-judicial uses to which the method has been put.

Pineda, 520 F.3d at 247-48.

"[T]he test of reliability is flexible" and this court possesses a broad latitude in determining reliability. Kumho Tire Co. v. Carmichael, 526 U.S. 137, 141-42 (1999). To be reliable under Daubert, a party need not prove that his or her expert's opinion is "correct." Paoli, 35 F.3d at 744. Instead:

> As long as an expert's scientific testimony rests upon good grounds, based on what is known, it should be tested by the adversary process –competing expert testimony and active cross–examination – rather than excluded from jurors' scrutiny for fear that they will not grasp its complexities or satisfactorily weigh its inadequacies.

United States v. Mitchell, 365 F.3d 215, 244 (3d Cir. 2004) (quoting Ruiz–Troche v. Pepsi Cola Bottling Co., 161 F.3d 77, 85 (1st Cir. 1998)).

As for "fit," expert testimony must also "assist the trier of fact to understand the evidence or to determine a fact in issue." Fed. R. Evid. 702. Thus, to "fit," such evidence must bear some relation to the "particular disputed factual issues in the case." United States v. Downing, 753 F.2d 1224, 1237 (3d Cir. 1985). Accordingly, this factor has been

described as one of relevance. Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579, 591 (1993); Paoli, 35 F.3d at 745 & n.13.

II.

Robertson-Armstrong retained Col. Lawrence to provide opinions on topics which include the design of the Robinson R22 helicopter, the company's manufacturing and corporate practices, and the company's compliance with the Federal Aviation Regulations. Col. Lawrence has also provided opinions on the qualifications of the pilot of the subject helicopter, certain possible causal factors in the crash, and the decisions made by the pilot before and during the helicopter's descent.

Col. Lawrence has extensive experience as a pilot in both military and civilian applications. A graduate of the United States Naval Test Pilot School, he served as a United States Marine Corps aviator for approximately 25 years, and is affiliated with the Society of Experimental Test Pilots. At the time of his retirement from service in 1991, he was the senior active test pilot in the Marine Corps and oversaw all rotocraft flight testing for the Marine Corps, the Navy, and the Coast Guard. He has accumulated more than 4000 hours of flight time in various types of aircraft, including helicopters. Col. Lawrence's work with experimental and engineering flight programs has required him to collaborate closely with engineering design teams from a number of helicopter companies. As part of this work, he has been involved

in the design and installation of various helicopter systems. Col. Lawrence has also taken part in a number of aviation crash investigations, becoming familiar with federal aviation regulations in the process. Furthermore, during his approximately 49 years as a licensed pilot, Col. Lawrence has been required to know and be able to apply these regulations. On several occasions, he has testified in state and federal courts about industry regulatory compliance. Finally, Col. Lawrence has completed several management courses.

Col. Lawrence provided Robertson-Armstrong's counsel with an expert report on July 9, 2015. In order to prepare that report, Col. Lawrence conducted an inspection of the wreckage of the subject crash. He also reviewed materials which included: transcripts of the depositions of Robertson-Armstrong, the pilot in the subject crash, and various Robinson employees; photographs and blueprints of the subject helicopter; photographs from inspections of the helicopter; medical records; and documents produced by both parties during discovery. He took into consideration factors such as weather conditions, wind speed, and visibility. He also considered the design of the Robinson R22 model helicopter and features specific to the subject helicopter itself, as well as the background and qualifications of the pilot. Based on these considerations, Col. Lawrence set forth in his report conclusions about the pilot's qualifications, Robertson-Armstrong's role during

the flight, whether meteorology or "mechanical considerations" were causal factors in the crash, the design of the subject helicopter and its impact on piloting, the reasonableness of that design, the risk-to-utility ratio of the aircraft's design characteristics, the degree to which Robinson considered safety a priority in helicopter design, and Robinson's compliance with federal regulations.

III.

Robinson acknowledges that Col. Lawrence "possesses considerable experience in the operation of helicopters and the standard of care for helicopter pilots" but argues that he lacks the expertise to opine on helicopter design, corporate and manufacturing practices, or Robinson's regulatory compliance. In addition, Robinson contends that Col. Lawrence's opinions relating to design, corporate practices, and regulatory compliance lack a reliable basis. It states that those opinions are "based on pure conjecture" and takes issue with Col. Lawrence's reliance on other experts.[2]

We agree with Robertson-Armstrong that Col. Lawrence is qualified to opine not only on piloting and helicopter operation but also on helicopter design and on regulatory compliance. His Curriculum Vitae makes clear that his piloting background has required him to develop and maintain adequate familiarity with the

2. Robinson does not appear to challenge the "fit" of Col. Lawrence's testimony to the facts of this particular case. See Pineda, 520 F.3d at 244.

applicable federal regulations. As a result, he "possess[es] specialized expertise" in that area. See Schneider, 320 F.3d at 404. The same is true of Col. Lawrence's knowledge of helicopter design, which is the result of decades of close collaboration with helicopter design professionals.

Furthermore, to the extent that Col. Lawrence's opinions address the design features of the subject helicopter, they appear limited to the manner in which specific design features (or the absence of certain features) restrict the options available to the pilot. For example, Col. Lawrence states in his report that "[t]he design characteristics of the R22 helicopter are such that any power loss, or requirement for excess power, in a high hover will so rapidly develop in a confusing scenario that the pilot has minimum time to react and virtually no chance of successfully recovering control of the helicopter." In addition, in characterizing the design of the R22 helicopter as "unreasonably dangerous," he qualifies his opinion by stating that the design is such that "in the event of any power loss or requirement of excess power, the pilot has no useable margin of safety." Finally, with respect to the availability of safer alternative designs, he posits that such designs "would allow aircrew to avoid the dangers inherent in the design and provide a much wider safety margin." In sum, Col. Lawrence's design opinions relate directly to helicopter

piloting, and as an expert in the operation of helicopters, he is qualified to offer those opinions.

However, we cannot see why Col. Lawrence's limited management background should qualify him to offer the opinion that Robinson "has made a conscious decision to abrogate its duty to put safety first in the design and operation of its helicopters by destroying all non-required documentation that might otherwise be used to foster safety, and by the absence of any committees or departments devoted to safety or risk management." While Robertson-Armstrong observes that Col. Lawrence "has graduated from numerous management courses" and "knows how to manage organizations" as a result of his service-related responsibilities, this experience falls short of qualifying Col. Lawrence to opine on Robinson's management practices. As a result, he will be precluded from testifying on this subject.

As to the reliability of the methodology used by Col. Lawrence in reaching the remaining conclusions contained in his report, he explains that his analysis involved the "in-depth" review of numerous materials related to the crash. Col. Lawrence also explains that he "discussed and worked closely with" other experts retained by Robertson-Armstrong. The conclusions listed in his report make clear the basis upon which Col. Lawrence formulated each opinion. Far from being based on "subjective belief or unsupported speculation," these conclusions are clearly grounded in

"the methods and procedures of science." See Schneider, 320 F.3d at 404. Any remaining deficiencies in Col. Lawrence's expert testimony may be "tested by the adversary process . . . rather than excluded from jurors' scrutiny." See Mitchell, 365 F.3d at 244.

Robinson takes issue with the fact that Col. Lawrence "defer[red] to Plaintiff's other experts to offer opinions about the R22 helicopter's engine capabilities and limitations." Indeed, Col. Lawrence states in his report that the subject of engine power "was extensively discussed" during "consultation with another expert involved in this matter." Col. Lawrence does not identify the other expert with whom he consulted. However, it is well established that an expert witness may formulate his opinion by relying, at least in part, on the opinions of other experts, particularly when those other experts have been retained in the same matter. See Fed. R. Evid. 703; Keller v. Feasterville Family Health Care Ctr., 557 F. Supp. 2d 671, 681 (E.D. Pa. 2008).

In sum, we will grant the motion of Robinson insofar as it seeks to preclude Col. Lawrence from offering testimony from a managerial standpoint about the company's manufacturing and corporate practices. The motion will otherwise be denied.